

REMARKS

I. Claims 1-18 were pending at the time of the June 15, 2005 office action.

Claims 14-15 are allowed.

Claims 1 and 16 are amended herein.

Claim 40 is added.

Claims 19-39 are cancelled herein.

Claims 1-18 and 40 are now pending.

Support for the amendment to claim 1 is found, for example, at pages 6-7, particularly page 7, lines 17-21, of the specification.

Support for the amendment to claim 16 is found, for example, at Example 3 in the specification.

Support for claim 40 is found, for example, at Example 8 in the specification.

II. Claim rejections under § 112, First Paragraph

In response to the rejections of claims 16-18 under 35 U.S.C. § 112, first paragraph found on page 2 of the Examiner's office action the Applicant has amended claim 16. Claims 17 and 18 depend from claim 16.

Claim 16 has been amended to now require that only the rows planted with the cultivars containing proprietary traits are harvested. Support for this amendment is found in Example 3 of the specification. Example 3 of the specification exemplifies the invention currently claimed by claim 16. No automatic color sorting or spraying with herbicide is required to work Example 3. Instead, in Example 3 the plants naturally cross-pollinate (at a low frequency) and only the seeds from the plants grown from the rows planted with yellow seeds (containing proprietary traits) are harvested. This grain will contain a small percentage of heterozygous seed, as shown in the charts in Example 3. The grain is replanted and harvested through at least one more generation, resulting in increasing proportions of heterozygous seed. Thus, claim 16 as amended,

exemplified by Example 3, can be followed without undue experimentation to generate hybrid seed. Accordingly, the Applicant respectfully submits that the Examiner's rejection of claim 16 on the basis that "generation of hybrids is not likely and would require additional undue experimentation" is overcome.

The Examiner also rejected claim 16 on the basis that steps disclosed in Example 8 of the specification were omitted from the claim (Office Action at p. 2). Specifically, claim 16 did not recite the "use of herbicide to eliminate selfed conventional seed" and it did not recite the use of a color sorter.

The Applicant respectfully traverses this rejection. Claim 16 is exemplified by Example 3, not Example 8. Example 3 does not require elimination of selfed conventional seed or the use of a color sorter. Therefore, it is unnecessary to amend claim 16 to add steps to that effect, and the Applicant respectfully submits that the basis for this rejection is overcome.

The Applicant is grateful that the Examiner considered Applicant's declaration regarding Takahasi et al. in considering claims 16-18, as indicated on pages 6-7 of the Office Action. Regretfully, that declaration has a typographical error on page 2, paragraph 5, where it refers to "the subject matter of claims 16-18." That part of the declaration should read "the subject matter of claims 14-15." The Applicant submitted the declaration to support its arguments for claims 14 and 15, not 16-18, and this is reflected on page 9 of the Applicant's response (dated 2/24/05) to the Examiner's Office Action of September 24, 2004. The Applicant apologizes for any confusion this may have caused.

III. Claim Rejections Under 35 U.S.C. § 103

Claims 1-13 are rejected under § 103 as being unpatentable over either Raque ('349) or Raque ('621) (collectively Raque) in view of Wright et al., Olsen and Williams. The Applicant respectfully traverses this rejection.

First, claim 1 has been amended to specify using a phenotypic marker of seed coat color and that the different plant varieties should have one or more natural seed coat color differences

from the dominant seed coat color in response to the Examiner's § 103 rejections of claims 1-13. These amendments were made to further distinguish the use in the present invention of natural seed coat colors to identify seed with a genetically modified trait from the use of dyed seed such as that recited in Raque.

Next, although the Examiner has conceded that Raque "do[es] not teach natural seed coat color as the phenotypical genetic difference between the seed types," this statement still puts too much significance on the term "phenotype." A phenotype includes *every* visible characteristic of a plant due to genotype and environment. It is unreasonable to expect that a reference's recitation of "phenotypical difference" will suggest to a person of ordinary skill any one specific phenotypical characteristic out of the numerous such characteristics available for any given plant species.

This is particularly the case with the Raque references because they (1) list specific phenotypical characteristics not including seed coat color, (2) the phenotypical characteristics listed involve features of the leaves or plants as a whole, rather than more discrete features such as seed coat color, and (3) rather than treating seed color as a phenotypical characteristic, Raque treats it as something to be artificially manipulated, *i.e.*, through dyeing the seed different colors. Seed color is thus given special, non-phenotypical characteristic, treatment by Raque. This conclusion is consistent with the Examiner's statement in the Office Action "[s]eed coats vary in nature and need not be dyed *as suggested* by Raque; the seed coat color itself can be an altered phenotypic trait." (p. 4, emphasis added). While seed coat color is part of a plant's phenotype, Raque does not teach or suggest taking advantage of seed coat color differences for purposes of the Raque methods and mixtures. In fact, Raque suggests otherwise.

The Raque references, therefore, contain no teaching or suggestion to use differences in natural seed coat color to identify grain having genetically modified traits. The Raque references also do not teach or suggest plant seed mixtures of seed having a genetically modified trait and having differences in seed coat color. Nor could they, as their mere recitation of "phenotypical difference" does not teach or suggest a category of phenotypical characteristics including seed

color. The Examiner has not asserted that any other reference or combination of references provides such a suggestion.

The Examiner's arguments regarding Wright et al., Williams, and Olsen are, respectfully, inapposite. The inventive aspect of the claimed methods and mixtures does not lie in any particular method of determining seed coat color; indeed that operation can be performed in some cases by the naked eye. Thus, whether or not one would be motivated to use NIR spectrophotometry, for example, to sort the seed of the present invention does not change the fact that Raque does not teach or suggest, by itself or in combination with any of the cited references, each of the limitations of claim 1 of the instant application.

With respect to the Examiner's arguments regarding Stroud, Knox, and Steyer, none of these teaches or suggests a plant seed mixture meeting the limitations of claim 1 of the instant application. In particular, these references say nothing about seed coat colors. Moreover, both Steyer and Knox disclose using immunological test strip kits to identify seed containing genetically modified traits, teaching away from the invention of the present application. The statement in the Office Action that "[d]ue to the large scale of the United States soybean crop, any combination of soybean seeds known in the art in any ratio of percentages is reasonably anticipated by these references for a specific moment in time" (p. 6), appears to be speculation and cannot form the basis of a rejection of claims 1-13 under § 103. See MPEP § 2144.03(C) ("If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2)").

None of the references cited by the Examiner affect the failure of Raque to teach or suggest the claimed mixtures and methods. For all these reasons, the Applicant respectfully submits that the Examiner's rejection of claims 1-13 under § 103 is overcome.

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In light of the above amendments and remarks, the Applicants respectfully submit that all outstanding objections and rejections are overcome.

The Examiner is encouraged to call the undersigned should any further action be required for allowance.

Respectfully submitted,



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